

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 10614 / PCT	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/EP2005/050614	International filing date (day/month/year) 11/02/2005	(Earliest) Priority Date (day/month/year) 19/02/2004
Applicant KRATON POLYMERS RESEARCH B.V.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 3.1(b)).

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box II).

3. ☐ Unity of invention is lacking (see Box III).

## 4. With regard to the title,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

LOW VISCOSITY HOT-MELT ADHESIVE COMPOSITION FOR NON-WOVENS

## 5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 36.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

## 6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. \_\_\_\_\_

☐ as suggested by the applicant.

☐ as selected by this Authority because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

BEST AVAILABLE COPY

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**International application No  
PCT/EP2005/050614

BEST AVAILABLE COPY

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
-----------	--

## 1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-7
Inventive step (IS)	Yes: Claims	
	No: Claims	1-7
Industrial applicability (IA)	Yes: Claims	1-7
	No: Claims	

## 2. Citations and explanations

see separate sheet

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

International application No

PCT/EP2005/050614

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial  
applicability; citations and explanations supporting such statement**

- 1 The following documents are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

D1: WO-A-02/057386 (KRATON POLYMERS), 25.07.2002

D2: DE-A-2942128 (BASF AG), 30.04.1981

D3: WPI/DERWENT-abstract 1994-040113 of JP-A-5345885 (KURARAY),  
27.12.1993

- 2 Document D1 discloses (1,3-6,9; page 5, lines 21-26; tables 1,2; page 1, lines 6-14) a hot-melt adhesive composition comprising a mixt. of (a) 100 pts. wt. of a linear block copolymer of formula A-B-A having a molecular weight of 100000 to 500000 and a coupling efficiency of more than 80%, in which the terminal A blocks are polystyrene and form 10-50 wt.% of the block copolymer and the block B is an elastomeric statistical copolymer of butadiene and isoprene in ratio by wt. of 70:30-70:30, (b) 50-400 pts. wt. of a tackifying resin, (c) up to 200 pts.wt. of a plasticizer, and opt. (d) the usual additives.

Hence, the subject-matter of claims 1,4 and 5 lacks novelty in view of D1.

The subject-matter of dependent claims 2,3 and 6,7 is also disclosed in D1.

- 3 Document D2 discloses (claims) a hot-melt adhesive comprising a mixt. of a) 100 pts. wt. of a non-hydrogenated, linear block copolymer with molecular weight of 30000-300000 of formula A-B-A, in which the terminal A blocks form 10-50 wt.% of the block copolymer and are of polystyrene, and the block B is an elastomeric statistical copolymer of butadiene and isoprene in ratio by wt. of 70:30-5:95, b) 25-300 pts.wt. of a tackifying resin, c) 5-200 pts.wt. of a rubber extending oil as plasticizer, and opt. d) the auxiliary additives.

The coupling efficiency is not disclosed in D2. The molecular weight is determined by a method different from the one in the present application. However, this does not necessarily mean that the compositions of the present application differ from

BEST AVAILABLE COPY

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/EP2005/050614

the ones disclosed in C2. In order to demonstrate the novelty of present claims 1,4 and 5 in view of D2 the Applicant is requested to provide further convincing evidence or arguments

- 4 Document D3 discloses a hot-melt adhesive comprising a mixt. of a) 100 pts. wt. of a block copolymer of formula A-B-A, in which the terminal A blocks form 30 wt.% of the block copolymer and are of polystyrene, and the block B is an elastomeric statistical copolymer of butadiene and isoprene in ratio by wt. of 50:50, b) 150 pts.wt. of a tackifying resin, c) 50 pts.wt. of a plasticizer, and d) the auxiliary additives.

Again, the coupling efficiency and the molecular weight are not explicitly disclosed. In order to demonstrate the novelty of present claims 1,4 and 5 in view of D3, the Applicant is requested to provide further convincing evidence or arguments.

RECT ARI F COPY